

SEQUENCE LISTING



TECH CENTER 1600/2900

SEP 25 2001

RECEIVED

<110> Cell Signaling Technology, Inc.
COMB, Michael J.
TAN, Yi

<120> PRODUCTION OF MOTIF-SPECIFIC AND CONTEXT-INDEPENDENT ANTIBODIES USING PEPTIDE LIBRARIES AS ANTIGENS

<130> CST-138 CIP

<140> US 09/535,364

<141> 2000-03-24

<150> US 09/148,712

<151> 1998-09-04

<160> 87

<170> PatentIn version 3.1

<210> 1

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (9)..(9)

<223> PHOSPHORYLATION; threonine at position 9 is phosphorylated

<400> 1

Ile Lys Asp Gly Ala Thr Met Lys Thr Phe Cys Gly Thr Pro
1 5 10

<210> 2

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 2

Asp Ala Ala Val Thr Pro Lys Lys Arg His Leu Ser Lys Cys
1 5 10

<210> 3
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (8)..(8)
<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 3

Asp Thr Gln Ile Lys Arg Asn Thr Phe Val Gly Thr Pro Phe Cys
1 5 10 15

<210> 4
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (5)..(5)
<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 4

His Gln Val Val Thr Arg Trp Tyr Arg Cys
1 5 10

<210> 5
<211> 10
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)..(7)
<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<400> 5

His Gln Val Leu Met Lys Thr Val Cys Gly
1 5 10

<210> 6
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)..(7)
<223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<400> 6

Ile Pro Ile Arg Val Tyr Thr His Glu Val Val Thr Leu Cys
1 5 10

<210> 7
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (8)..(8)
<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 7

Gly Val Pro Val Arg Thr Tyr Thr His Glu Val Val Thr Leu Cys
1 5 10 15

<210> 8
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (8)..(8)
<223> PHOSPHORYLATION; threonine at position 8 is phosphorylated

<400> 8

Asn Gln Val Phe Leu Gly Phe Thr Tyr Val Ala Pro Lys Lys Cys
1 5 10 15

<210> 9
<211> 14

<212> PRT
 <213> Homo sapiens

 <220>
 <221> MOD_RES
 <222> (12)..(12)
 <223> PHOSPHORYLATION; threonine at position 12 is phosphorylated

<400> 9

Lys Glu His Met Met Asp Gly Val Thr Thr Arg Thr Phe Cys
 1 5 10

<210> 10
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> PHOSPHORYLATION; threonine at position 7 is phosphorylated

<220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> PHOSPHORYLATION; tyrosine at position 9 is phosphorylated

<400> 10

Asp His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Cys
 1 5 10 15

<210> 11
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>
 <221> MOD_RES
 <222> (9)..(9)
 <223> PHOSPHORYLATION; serine at position 9 is phosphorylated

<400> 11

Glu Leu Leu Pro Thr Pro Pro Leu Ser Pro Ser Arg Arg Ser Cys
1 5 10 15

<210> 12

<211> 17

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MOD_RES

<222> (12)..(12)

<223> PHOSPHORYLATION; tyrosine at position 12 is phosphorylated

<400> 12

Leu Ala Arg His Thr Asp Asp Glu Met Thr Gly Tyr Val Ala Thr Arg
1 5 10 15

Cys

<210> 13

<211> 15

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (5)..(5)

<223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<220>

<221> MOD_RES

<222> (7)..(7)

<223> PHOSPHORYLATION; tyrosine at position 7 is phosphorylated

<400> 13

Ser Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Cys
 1 5 10 15

<210> 14
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC FEATURE
 <222> (11)..(11)
 <223> Xaa at position 11 is arginine or lysine

<220>
 <221> MISC FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 14

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
 1 5 10

<210> 15
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>
 <221> MISC FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 15

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
1 5 10

<210> 16

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 16

Xaa Xaa Xaa Xaa Arg Ser Xaa Ser Xaa Pro Xaa Xaa Xaa Xaa
1 5 10

<210> 17

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>

<221> MISC FEATURE

<222> (1)..(14)

<223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 17

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 18

<211> 14

<212> PRT

<213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is serine or threonine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 18

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa
 1 5 10

<210> 19
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (5)..(5)
 <223> Xaa at position 5 is aspartic acid or glutamic acid

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 6-7, and 9-13 = any one of the 20 amino acids except cysteine

<400> 19

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10

<210> 20
 <211> 13
 <212> PRT
 <213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
<221> MISC_FEATURE
<222> (8)..(10)
<223> Xaa at positions 8-10 is aspartic acid or glutamic acid

<220>
<221> MISC_FEATURE
<222> (1)..(13)
<223> Xaa at positions 1-6, and 11-13 = any one of the 20 amino acids except cysteine

<400> 20

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
1 5 10

<210> 21
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (9)..(9)
<223> Xaa at position 9 is phosphoserine or phosphothreonine

<220>
<221> MISC_FEATURE
<222> (10)..(10)
<223> Xaa at position 10 is phenylalanine or tyrosine

<220>
<221> MISC_FEATURE
<222> (1)..(14)
<223> Xaa at positions 1-4, 6-7, and 11-14 = any one of the 20 amino acids except cysteine

<400> 21

Xaa Xaa Xaa Xaa Phe Xaa Xaa Phe Xaa Xaa Xaa Xaa Xaa Xaa Cys
Page 9

1 5 10 15

<210> 22
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (5)..(5)
<223> Xaa at position 5 is arginine or lysine

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
<221> MISC_FEATURE
<222> (1)..(13)
<223> Xaa at positions 1-4, 6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 22

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 23
<211> 14
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa at position 4 is arginine or lysine

<220>
<221> MISC_FEATURE
<222> (1)..(13)

<223> Xaa at positions 1-3, 5-6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 23

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 24

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC_FEATURE

<222> (8)..(8)

<223> Xaa at position 8 is phenylalanine or isoleucine or methionine

<220>

<221> MISC_FEATURE

<222> (1)..(13)

<223> Xaa at positions 1-6, and 9-13 = any one of the 20 amino acids except cysteine

<400> 24

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 25

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MISC_FEATURE

<222> (7)..(7)

<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>

<221> MISC_FEATURE

<222> (8)..(8)
<223> Xaa at position 8 is phenylalanine or isoleucine

<220>
<221> MISC_FEATURE
<222> (1)..(13)
<223> Xaa at positions 1-6, and 9-13 = any one of the 20 amino acids except cysteine

<400> 25

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10

<210> 26
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa at position 7 is phosphoserine or phosphothreonine

<220>
<221> MISC_FEATURE
<222> (1)..(14)
<223> Xaa at positions 1-6, and 9-14= any one of the 20 amino acids except cysteine

<400> 26

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Xaa Cys
1 5 10 15

<210> 27
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>

<221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 27

Xaa	Xaa	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5				10						15

<210> 28
 <211> 14
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (7)..(7)
 <223> Xaa at position 7 is serine or threonine

<220>
 <221> MISC_FEATURE
 <222> (1)..(13)
 <223> Xaa at positions 1-6, and 8-13 = any one of the 20 amino acids except cysteine

<400> 28

Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5				10					

<210> 29
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (11)..(11)
 <223> Xaa at position 11 is arginine or lysine

<220>
 <221> MISC FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 29

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10 15

<210> 30
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 30

Val Ile Pro Pro His Thr Pro Val Arg Thr Val Met Asn Thr Cys
 1 5 10 15

<210> 31
 <211> 10
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (5)..(5)
 <223> PHOSPHORYLATION; threonine at position 5 is phosphorylated

<400> 31

Ser Val Ala Lys Thr Met Asp Ala Gly Cys
 1 5 10

<210> 32
 <211> 16
 <212> PRT
 <213> Homo sapiens

<220>

<221> MOD_RES
 <222> (10)..(10)
 <223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<400> 32

Arg	Ile	Tyr	Ser	Tyr	Gln	Met	Ala	Leu	Thr	Pro	Val	Val	Val	Lys	Cys
1				5					10					15	

<210> 33
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 33

Xaa	Xaa	Xaa	Xaa	Arg	Ser	Xaa	Ser	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15

<210> 34
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 7, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 34

Xaa	Xaa	Xaa	Xaa	Arg	Ser	Xaa	Ser	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Cys
1				5					10					15

<210> 35
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)..(7)
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 35

Gly Leu Tyr Arg Ser Pro Ser Met Pro Glu Asn Leu Asn Arg Cys
1 5 10 15

<210> 36
<211> 15
<212> PRT
<213> Homo sapiens

<400> 36

Gly Leu Tyr Arg Ser Pro Ser Met Pro Glu Asn Leu Asn Arg Cys
1 5 10 15

<210> 37
<211> 15
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (7)..(7)
<223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 37

Thr Arg Ser Arg His Ser Ser Tyr Pro Ala Gly Thr Glu Glu Cys
1 5 10 15

<210> 38
<211> 15
<212> PRT
<213> Homo sapiens

<400> 38

Thr Arg Ser Arg His Ser Ser Tyr Pro Ala Gly Thr Glu Glu Cys
Page 16

1 5 10 15

<210> 39
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 39

Phe Arg Gly Arg Ser Arg Ser Ala Pro Pro Asn Leu Trp Ala Cys
 1 5 10 15

<210> 40
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (7)..(7)
 <223> PHOSPHORYLATION; serine at position 7 is phosphorylated

<400> 40

Phe Arg Gly Arg Ser Arg Ser Ala Pro Pro Asn Leu Trp Ala Cys
 1 5 10 15

<210> 41
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is serine or threonine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, and 10-14 = any one of the 20 amino acids except cysteine

<400> 41

Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Pro Xaa Xaa Xaa Xaa Xaa Cys
 1 5 10 15

<210> 42
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (8)..(8)
 <223> Xaa at position 8 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (11)..(11)
 <223> Xaa at position 11 is arginine or lysine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-5, 7, 10, and 12-14 = any one of the 20 amino acids except cysteine

<400> 42

Xaa	Xaa	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Pro	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5				10						15

<210> 43
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (8)..(8)
 <223> PHOSPHORYLATION; serine at position 8 is phosphorylated

<400> 43

Ser	Pro	Tyr	Lys	Phe	Pro	Ser	Ser	Pro	Leu	Arg	Ile	Pro	Gly	Cys
1				5				10						15

<210> 44
 <211> 15
 <212> PRT
 <213> Homo sapiens

<400> 44

Val Ile Pro Pro His Thr Pro Val Arg Thr Val Met Asn Thr Cys
1 5 10 15

<210> 45

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (2)..(14)

<223> Xaa at positions 2-4, 6, 8-9, 11-14 = any one of the 20 amino acids except cysteine

<400> 45

Cys Xaa Xaa Xaa Arg Xaa Arg Xaa Xaa Thr Xaa Xaa Xaa Xaa
1 5 10

<210> 46

<211> 14

<212> PRT

<213> Homo sapiens

<220>

<221> MOD RES

<222> (10)..(10)

<223> PHOSPHORYLATION; threonine at position 10 is phosphorylated

<220>

<221> MISC_FEATURE

<222> (2)..(14)

<223> Xaa at positions 2-6, 9, and 11-14 = any one of the 20 amino acids except cysteine

<400> 46

Cys Xaa Xaa Xaa Xaa Xaa Arg Arg Xaa Thr Xaa Xaa Xaa Xaa
1 5 10

<210> 47
 <211> 15
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MISC_FEATURE
 <222> (9)..(9)
 <223> Xaa at position 9 is phosphoserine or phosphothreonine

<220>
 <221> MISC_FEATURE
 <222> (10)..(10)
 <223> Xaa at position 10 is phenylalanine or tyrosine

<220>
 <221> MISC_FEATURE
 <222> (1)..(14)
 <223> Xaa at positions 1-4, 6-7, and 11-14 = any one of the 20 amino acids except cysteine

<400> 47

Xaa	Xaa	Xaa	Xaa	Phe	Xaa	Xaa	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Cys
1				5				10						15

<210> 48
 <211> 8
 <212> PRT
 <213> Homo sapiens

<220>
 <221> MOD_RES
 <222> (6)..(6)
 <223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 48

Arg	Gln	Arg	Ser	Thr	Ser	Thr	Pro
1				5			

<210> 49
 <211> 8
 <212> PRT
 <213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 49

Lys Gly Arg Thr Trp Thr Leu Cys
1 5

<210> 50
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 50

Arg Pro Arg Thr Thr Ser Phe Ala
1 5

<210> 51
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 51

Arg Arg Arg Thr Ser Ser Phe Ala
1 5

<210> 52
<211> 8
<212> PRT
<213> Homo sapiens

<220>

<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 52

Arg Arg Arg Ala Ala Ser Met Asp
1 5

<210> 53
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 53

Arg Ile Arg Thr Gln Ser Phe Ser
1 5

<210> 54
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)
<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 54

Arg Glu Arg Lys Arg Thr Val Trp
1 5

<210> 55
<211> 8
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 55

Lys Asp Arg Gln Gly Thr His Lys
1 5

<210> 56

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 56

Arg Asp Arg Asn Gly Thr His Leu
1 5

<210> 57

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 57

Lys Leu Arg Leu Ser Thr Asp Tyr
1 5

<210> 58

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 58

Arg Asp Lys Ser Val Thr Asp Ser
1 5

<210> 59

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 59

Arg Leu Arg Lys Ser Ser Ser Tyr
1 5

<210> 60

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; threonine at position 6 is phosphorylated

<400> 60

Arg Pro Arg Ser Cys Thr Trp Pro
1 5

<210> 61

<211> 8

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (6)..(6)

<223> PHOSPHORYLATION; serine at position 6 is phosphorylated

<400> 61

Arg Arg Arg Ala Ala Ser Met Asp
1 5

<210> 62
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)-(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 62

Arg Phe Phe Thr Arg
1 5

<210> 63
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)-(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 63

Arg Thr Tyr Thr Leu
1 5

<210> 64
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)-(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 64

Lys Arg Ser Thr Met

1 5

<210> 65
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 65

Arg Arg Arg Ser Ser
1 5

<210> 66
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 66

Arg Arg Pro Ser Tyr
1 5

<210> 67
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 67

Arg Thr Tyr Thr His
1 5

<210> 68
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)-(4)
<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 68

Arg Ser Pro Ser Met
1 5

<210> 69
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)-(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 69

Arg Lys Arg Thr Val
1 5

<210> 70
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)-(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 70

Arg Gln Gly Thr His
1 5

<210> 71

<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 71

Arg Ser Leu Thr Glu
1 5

<210> 72
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 72

Arg Gln Glu Thr Val
1 5

<210> 73
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 73

Arg Ala Tyr Thr His
1 5

<210> 74
<211> 5
<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (4)-(4)

<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 74

Lys Arg Asp Thr Phe
1 5

<210> 75

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (4)-(4)

<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 75

Lys Ser Val Thr Asp
1 5

<210> 76

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (4)-(4)

<223> PHOSPHORYLATION; serine at position 4 is phosphorylated

<400> 76

Arg Lys Ser Ser Ser
1 5

<210> 77

<211> 5

<212> PRT

<213> Homo sapiens

<220>
<221> MOD_RES
<222> (4)..(4)
<223> PHOSPHORYLATION; threonine at position 4 is phosphorylated

<400> 77

Arg Ser Cys Thr Tyr
1 5

<210> 78
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 78

Phe Phe Thr Arg His
1 5

<210> 79
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 79

Thr Trp Thr Leu Cys
1 5

<210> 80
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES

<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 80

Gln Arg Ser Phe Val
1 5

<210> 81
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 81

Ala Tyr Ser Phe Cys
1 5

<210> 82
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 82

Gly Tyr Ser Phe Val
1 5

<210> 83
<211> 5
<212> PRT
<213> Homo sapiens

<220>
<221> MOD_RES
<222> (3)..(3)
<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 83

Thr Thr Ser Phe Ala
1 5

<210> 84

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; serine at position 3 is phosphorylated

<400> 84

Thr Ser Ser Phe Ala
1 5

<210> 85

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 85

Val Tyr Thr His Glu
1 5

<210> 86

<211> 5

<212> PRT

<213> Homo sapiens

<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 86

Thr Tyr Thr His Glu
1 5

<210> 87

<211> 5

<212> PRT

<213> Homo sapiens

Blind
<220>

<221> MOD_RES

<222> (3)..(3)

<223> PHOSPHORYLATION; threonine at position 3 is phosphorylated

<400> 87

Ala Tyr Thr His Gln
1 5
